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PREHISTORIC OCCURRENCE OF THE REDBELLY TURTLE
(Pseudemys rubriventris)
AT CONCORD, MIDDLESEX COUNTY, MASSACHUSETTS

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The current range of the redbelly turtle (*Pseudemys rubriventris*) in Massachusetts is extremely limited, encompassing a few ponds in Plymouth County and possibly Ipswich, Essex County (Graham 1982; U.S. Fish and Wildlife Service 1981). Statements that *rubriventris* may also exist on Naushon Island, Duker County (Lazell 1976; U.S. Fish and

Wildlife Service 1981) have been questioned by Graham (1982), who excludes Naushon from the present range. The prehistoric range of *rubriventris* also encompassed Ipswich as well as Martha's Vineyard, Duker County, where finds have been made of Indian mid-den specimens (Bullen 1949; Waters 1962, 1966, 1969; Lazell 1976; Graham 1982).

Waters (1962) theorized that the Massachusetts population of *rubriventris* was an isolated remnant of a widely distributed coastal *rubriventris* population extending from Virginia in the south to Massachusetts in the north. He further theorized that the disjunct Massachusetts population had become increasingly restricted through prehistoric extirpation due to human predation. Based on the above evidence and theoretical considerations, Waters (1962), Lazell (1976), and U.S. Fish and Wildlife Service (1981) have concluded that *rubriventris* may have been widespread in eastern Massachusetts in prehistoric times. Further data to delineate the extent of this range are clearly needed.

We recently examined bone fragments from prehistoric Concord Shell Heap, an Indian midden located on the Sudbury River at Route 2, Concord, Middlesex County, Massachusetts. The site and its remains were originally described by Smith (1940) who reported finding 571 turtle fragments, which, however, he did not attempt to identify. Careful re-examination of Smith's material reveals the presence of 683 turtle fragments. Of these, 63 can readily be identified as representing *rubriventris*. The fragments reported on here are currently in the collection of the Concord Antiquarian Museum, number 19MD388 (M33-18).

Among the 63 fragments several can be pieced together to form series from individual animals. The most complete is a 5-bone set comprising neurals 3 through 6 with a portion of the right 6th costal. The midline length from N3 to N6 in this specimen is 104.8 mm, which corresponds to a large individual of approximately 300 mm carapace length (based on comparative measurements of 4 whole adult *rubriventris* shells from the Museum of Comparative Zoology, Harvard University). Also present are the right 8th through 10th marginals of a large individual as well as the left 11th marginal and pygal bones from 2 large individuals. Two pieces from a single large nuchal are present, as are 6 additional separate marginal bone fragments. In addition, there are two pieces each from the left 6th and 8th costals of two individuals, one large and one rather small, as well as 32 other costal fragments. Additionally, there are 2 fragments from the left xiphoplastron and one right xiphoplastron from 2 large individuals, as well as 4 other plastron fragments. Based on our analysis of these fragments, there were at least 3 individual *rubriventris* in the Concord Shell Heap (2 large and one smaller).

None of the fragments of *rubriventris* show signs of having been worked by prehistoric people, and many of them are fire-charred. In all probability, therefore, these animals were collected locally for consumption and were not obtained via inter-tribal trade (see Bleakney 1958; Adler 1968, 1970).

These findings establish the presence of *rubriventris* in Concord in prehistoric times, ca. 80 km to the northwest of Plymouth and ca. 55 km to the southwest of Ipswich. They also lend further support to the theory that *rubriventris* formerly inhabited a wider area in eastern Massachusetts and that it may have become extirpated at least partially through the activity of prehistoric man.

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